



[6450-01-P]

DEPARTMENT OF ENERGY

Lake Charles Exports, LLC	[FE Docket No. 11-59-LNG]
Gulf Coast LNG Export, LLC	[FE Docket No. 12-05-LNG]
Jordan Cove Energy Project, L.P.	[FE Docket No. 12-32-LNG]
LNG Development Company, LLC (d/b/a Oregon LNG)	[FE Docket No. 12-77-LNG]
Southern LNG Company, L.L.C.	[FE Docket No. 12-100-LNG]
Gulf LNG Liquefaction Company, LLC	[FE Docket No. 12-101-LNG]
CE FLNG, LLC	[FE Docket No. 12-123-LNG]
Golden Pass Products LLC	[FE Docket No. 12-156-LNG]
Lake Charles LNG Export Company, LLC	[FE Docket No. 13-04-LNG]
Freeport-McMoRan Energy LLC	[FE Docket No. 13-26-LNG]
Venture Global Calcasieu Pass, LLC	[FE Docket No. 13-69-LNG]
Eos LNG LLC	[FE Docket No. 13-116-LNG]
Barca LNG LLC	[FE Docket No. 13-118-LNG]
Magnolia LNG, LLC	[FE Docket No. 13-132-LNG]
Delfin LNG LLC	[FE Docket No. 13-147-LNG]
Waller LNG Services, LLC	[FE Docket No. 13-153-LNG]
Gasfin Development USA, LLC	[FE Docket No. 13-161-LNG]
Louisiana LNG Energy LLC	[FE Docket No. 14-29-LNG]
Venture Global Calcasieu Pass, LLC	[FE Docket No. 14-88-LNG]
SCT&E LNG, LLC	[FE Docket No. 14-98-LNG]
Downeast LNG, Inc.	[FE Docket No. 14-173-LNG]
Venture Global Calcasieu Pass, LLC	[FE Docket No. 15-25-LNG]
G2 LNG LLC	[FE Docket No. 15-45-LNG]
Texas LNG Brownsville LLC	[FE Docket No. 15-62-LNG]
Strom Inc.	[FE Docket No. 15-78-LNG]
Cameron LNG, LLC	[FE Docket No. 15-90-LNG]
Port Arthur LNG, LLC	[FE Docket No. 15-96-LNG]
Corpus Christi Liquefaction, LLC	[FE Docket No. 15-97-LNG]
Flint Hills Resources, LP	[FE Docket No. 15-168-LNG]

Macroeconomic Impacts of LNG Exports Studies

AGENCY: Office of Fossil Energy, Department of Energy.

ACTION: Notice of availability of the 2014 EIA LNG Export Study and the 2015 LNG Export Study, and request for comments.

SUMMARY: The Office of Fossil Energy (FE) of the Department of Energy (DOE) gives notice of the availability of two studies examining the cumulative impacts of liquefied natural gas (LNG) exports in the above-referenced proceedings and invites the submission of comments regarding those studies. DOE commissioned the studies to inform DOE's decisions on applications seeking authorization to export LNG from the lower-48 states to non-free trade agreement countries.¹ The first study, performed by the U.S. Energy Information Administration (EIA) and originally published in October 2014, assessed how specified scenarios of increased natural gas exports could affect domestic energy markets (2014 EIA LNG Export Study). At DOE's request, this study was an update of EIA's January 2012 study of LNG export scenarios using baseline cases from EIA's 2014 *Annual Energy Outlook*. The second study was performed by the Center for Energy Studies at Rice University's Baker Institute and Oxford Economics, under contract to DOE (2015 LNG Export Study). This 2015 LNG Export Study is a scenario-based assessment of the macroeconomic impact of levels of U.S. LNG exports sourced from the lower-48 states in volumes ranging from 12 to 20 billion cubic feet per day (Bcf/d) of natural gas under a range of assumptions, including U.S. resource endowment, U.S. natural gas demand, international LNG market dynamics, and other factors. These two studies are posted on the DOE/FE website at: <http://www.energy.gov/fe/2015-lng-study>. DOE may use the 2014 EIA LNG Export Study and the 2015 LNG Export Study to inform its decisions in the listed proceedings and for other purposes. Comments submitted in compliance with the instructions in this notice will be placed in the administrative record for all of the above-listed proceedings and need only be submitted once.

¹ The studies did not consider the impact of exports of Alaska natural gas production. Because there is no natural gas pipeline interconnection between Alaska and the lower-48 states, the macroeconomic consequences of exporting LNG from Alaska are likely to be discrete and separate from those of exporting from the lower-48 states.

DATES: Comments are to be filed using procedures detailed in the **Public Comment**

Procedures section no later than 4:30 p.m., Eastern time, **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. DOE will not accept reply comments.

ADDRESSES:

Electronic Filing of Comments Using Online Form:

<http://www.energy.gov/fe/2015-lng-study>

Regular Mail

U.S. Department of Energy (FE-34)
Office of Regulation and International Engagement
Office of Fossil Energy
P.O. Box 44375
Washington, DC 20026-4375

Hand Delivery or Private Delivery Services (e.g., FedEx, UPS, etc.)

U.S. Department of Energy (FE-34)
Office of Regulation and International Engagement
Office of Fossil Energy
Forrestal Building, Room 3E-042
1000 Independence Avenue, SW.,
Washington, DC 20585

FOR FURTHER INFORMATION CONTACT:

Robert Smith
U.S. Department of Energy (FE-1)
Office of Fossil Energy
Forrestal Building, Room 3E-042
1000 Independence Avenue SW.,
Washington, DC 20585
(202) 586-7241

Edward Myers or Cassandra Bernstein
U.S. Department of Energy (GC-76)
Office of the Assistant General Counsel for
Electricity and Fossil Energy
Forrestal Building
1000 Independence Avenue, SW.,
Washington, DC 20585

SUPPLEMENTARY INFORMATION:

Background

Pursuant to section 3 of the Natural Gas Act, 15 U.S.C. 717b, exports of natural gas, including LNG, must be authorized by DOE/FE.² Applications that seek authority to export natural gas to countries with which the United States has not entered into a free trade agreement (FTA) requiring national treatment for trade in natural gas (non-FTA countries) are presumed to be in the public interest unless, after opportunity for hearing, DOE finds that the authorizations would not be consistent with the public interest.

Previously, in August 2012, DOE/FE had authorized one non-FTA LNG export authorization—to Sabine Pass Liquefaction, LLC, for a volume of LNG equivalent to 2.2 Bcf/d of natural gas—and had several other non-FTA export applications pending before it.³ DOE/FE therefore determined that further study of the economic impacts of LNG exports was warranted to better inform its public interest review under section 3 of the NGA. Accordingly, on December 11, 2012, DOE gave notice of the availability of the 2012 LNG Export Study.⁴ DOE commissioned that Study, consisting of two separate parts, of the economic impacts of exporting LNG to non-FTA nations up to 12 billion cubic feet per day (Bcf/d). The 2012 LNG Export Study was comprised of the following:

² The authority to regulate the imports and exports of natural gas, including liquefied natural gas, under section 3 of the NGA (15 U.S.C. 717b) has been delegated to the Assistant Secretary for FE in Redelegation Order No. 00-006.02 (issued November 17, 2014).

³ See, e.g., *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 2961-A, FE Docket No. 10-111-LNG, Final Opinion and Order Granting Long-Term Authorization to Export Liquefied Natural Gas From Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations (Aug. 7, 2012).

⁴ U.S. Dep't of Energy, 2012 LNG Export Study, Notice of Availability and Request for Comments, 77 Fed. Reg. 73,627 (Dec. 11, 2012).

- An analysis performed by the Energy Information Administration (EIA) and originally published in January 2012, entitled *Effect of Increased Natural Gas Exports on Domestic Energy Markets* (2012 EIA Study), examining the impact of two prescribed levels of assumed natural gas exports (at 6 Bcf/d and 12 Bcf/d) under numerous scenarios and cases based on projections from EIA's 2011 *Annual Energy Outlook*, which were the most recent EIA projections available at the time; and
- An evaluation performed by NERA Economic Consulting (NERA), a private contractor retained by DOE, entitled *Macroeconomic Impacts of Increased LNG Exports From the United States* (NERA Study), which incorporated EIA's case study output using EIA's National Energy Modeling System model into NERA's general equilibrium model of the U.S. economy, with an emphasis on the energy sector and natural gas in particular. NERA analyzed the potential macroeconomic impacts of LNG exports under a range of global natural gas supply and demand scenarios.

DOE/FE invited public comment on the 2012 LNG Export Study, and received comments representing a diverse range of interests and perspectives.

To date, DOE/FE has issued 12 final long-term authorizations, in response to 14 applications, granting long-term authority to export LNG and compressed natural gas (CNG) to non-FTA countries in a cumulative volume of exports totaling 10.008 Bcf/d of natural gas.⁵ DOE/FE considered the comments received on the 2012 LNG Export Study in its review of each of those applications (except for the first application—Sabine Pass Liquefaction, LLC in FE Docket No. 10-111-LNG—which was granted at approximately the same time that DOE commenced the 2012 LNG Export Study).⁶ Additionally, DOE/FE has explained that, in deciding whether to grant a non-FTA export application, it considers in its decision-making the cumulative impacts

⁵ See *Air Flow North America Corp.*, DOE/FE Order No. 3753, FE Docket No. 14-206-LNG, Final Opinion and Order Granting Long-Term, Multi Contract Authorization to Export Liquefied Natural Gas in ISO Containers Loaded at the Clean Energy Fuels Corp. LNG Production Facility in Willis, Texas, and Exported by Vessel to Non-Free Trade Agreement Nationals in Central America, South America, the Caribbean, or Africa, at 24-25 (Dec. 4, 2015) (identifying the 12 final non-FTA export authorizations issued to date, including the first authorization granted to Sabine Pass Liquefaction, LLC).

⁶ See *supra* n.3; see also, e.g., *Sabine Pass Liquefaction, LLC*, DOE/FE Order No. 3669, FE Docket Nos. 13-30-LNG, 13-42-LNG, & 13-121-LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Sabine Pass LNG Terminal Located in Cameron Parish, Louisiana, to Non-Free Trade Agreement Nations, at 94-149 (June 26, 2015) (“Comments on the 2012 LNG Export Study and DOE/FE Analysis”).

of the total volume of all final non-FTA export authorizations.⁷ DOE/FE has further stated that it will assess the cumulative impacts of each succeeding request for export authorization on the public interest with due regard to the effect on domestic natural gas supply and demand fundamentals.⁸

The 29 proceedings identified above involve applications submitted by the named parties seeking authorization to export LNG from the lower-48 states to non-FTA countries. In light of the volume of long-term LNG and CNG exports to non-FTA countries authorized to date, DOE/FE determined that a study of the economic impacts of LNG exports is again warranted. Therefore, on May 29, 2014, DOE announced plans to undertake economic studies in order to gain a better understanding of how potentially higher levels of U.S. LNG exports—between 12 and 20 Bcf/d of natural gas—would affect the public interest.

Specifically, for the 2014 EIA LNG Export Study, DOE/FE asked EIA to evaluate the impact of increased natural gas demand, reflecting possible exports of U.S. natural gas, on domestic energy markets using the modeling analysis presented in the *Annual Energy Outlook 2014* as a starting point. Second, for the 2015 LNG Export Study, DOE/FE engaged the Center for Energy Studies at Rice University's Baker Institute and Oxford Economics for an external analysis of the economic impact of this increased range of LNG exports and other effects that LNG exports might have on the U.S. natural gas market.

The purpose of this Notice is to enter the 2014 EIA LNG Export Study and the 2015 LNG Export Study in the administrative record of the 29 listed non-FTA export proceedings and to invite comments on these two studies, as applied to each proceeding. The 2014 EIA LNG

⁷ *Id.* at 211-12.

⁸ *Id.* at 212.

Export Study, the 2015 LNG Export Study, and the comments that DOE/FE receives in response to this Notice will help to inform DOE's determination of the public interest in each case.

The 2014 EIA LNG Export Study

EIA prepared a report entitled *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets* in response to the May 29, 2014 request from DOE/FE for an update of the EIA's January 2012 study of LNG export scenarios. DOE/FE asked EIA to assess how specified scenarios of increased exports of LNG from the lower-48 states would affect domestic energy markets, focusing on consumption, production, and prices. The DOE/FE scenarios posit total LNG exports sourced from the lower-48 states of 12 Bcf/d, 16 Bcf/d, and 20 Bcf/d, with these exports phased in at a rate of 2 Bcf/d each year beginning in 2015. DOE/FE requested that EIA consider the specified lower-48 states LNG export scenarios in the context of baseline cases from EIA's *2014 Annual Energy Outlook 2014*, which reflect varying perspectives on domestic natural gas supply, the growth rate of the U.S. economy, and natural gas use for electricity generation.

The 2015 LNG Export Study

The Center for Energy Studies at Rice University's Baker Institute and Oxford Economics were jointly commissioned to undertake a scenario-based assessment of the macroeconomic impact of alternative levels of U.S. LNG exports under a range of assumptions concerning U.S. resource endowment (natural gas supply), U.S. natural gas demand, and the international market environment.

A comprehensive set of scenarios was prepared to understand the economic impact of higher U.S. LNG exports under a range of circumstances for domestic and international gas markets. This scenario approach was chosen to enable conclusions that are independent of any particular

set of starting conditions for the U.S. or international natural gas markets, and to highlight the impact of increasing U.S. LNG exports under alternative domestic and international conditions. The authors considered sets of circumstances that would result in different international demand pull for U.S. sourced LNG. The variants considered were international conditions sufficient to support 12 Bcf/d and 20 Bcf/d of U.S. LNG exports.

Invitation to Comment

DOE invites comments on the 2014 EIA LNG Export Study and/or the 2015 LNG Export Study to help inform DOE in its public interest determinations of the authorizations sought in the 29 non-FTA export applications identified above. Comments must be limited to the methodology, results, and conclusions of these studies on the factors evaluated. These factors include the potential impact of LNG exports on domestic energy consumption, production, and prices; the macroeconomic factors identified in the two studies, including Gross Domestic Product, consumption, U.S. economic sector analysis, and U.S. LNG export feasibility analysis; and any other factors included in the analyses. In addition, comments may be directed toward the feasibility of various scenarios used in both analyses. While this invitation to comment covers a broad range of issues, the Department may disregard comments that are not germane to the present inquiry. Due to the complexity of the issues raised in these studies, interested parties will be provided 45 days from the date of publication of this Notice in which to submit their comments.

Public Comment Procedures

DOE is not establishing a new proceeding or docket by today's issuance, and the submission of comments in response to this Notice will not make commenters parties to any of the 29 listed LNG export proceedings. Persons with an interest in the outcome of one or more of those

proceedings have been given an opportunity to intervene in and/or protest those applications by complying with the procedures established in the respective notices of application published in the **Federal Register**.⁹ The record in those 29 proceedings will include all comments received in response to this Notice. Comments will be reviewed on a consolidated basis for purposes of hearing, and decisions will be issued on a case-by-case basis. In addition to the procedures established by this Notice, all comments must meet the requirements specified by the regulations in 10 CFR part 590, as supplemented below.

Comments may be submitted using one of the following supplemental methods:

(1) Submitting the comments using the online form at <http://www.energy.gov/fe/2015-lng-study>;

(2) Mailing an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES**; or

⁹ Notices of application in 28 of 29 proceedings were published in the **Federal Register** as follows: *Lake Charles Exports, LLC*, FE Docket No. 11-59-LNG, 76 FR 34212 (June 13, 2011); *Gulf Coast LNG Export, LLC*, FE Docket No. 12-05-LNG, 77 FR 32962 (June 4, 2012); *Jordan Cove Energy Project, L.P.*, FE Docket No. 12-32-LNG, 77 FR 33446 (June 6, 2012); *LNG Development Co., LLC (d/b/a Oregon LNG)*, FE Docket No. 12-77-LNG, 77 FR 55197 (Sept. 7, 2012); *Southern LNG Co, L.L.C.*, FE Docket No. 12-100-LNG, 77 FR 63806 (Oct. 17, 2012); *Gulf LNG Liquefaction Co., LLC*, FE Docket No. 12-101-LNG, 77 FR 66454 (Nov. 5, 2012); *CE FLNG, LLC*, FE Docket No. 12-123-LNG, 77 FR 72840 (Dec. 6, 2012); *Golden Pass Products LLC*, FE Docket No. 12-156-LNG, 77 FR 72837 (Dec. 6, 2012); *Lake Charles LNG Export Co., LLC (formerly Trunkline LNG Export, LLC)*, FE Docket No. 13-04-LNG, 78 FR 17189 (Mar. 20, 2013); *Freeport-McMoRan Energy LLC*, FE Docket No. 13-26-LNG, 78 FR 34084 (June 6, 2013); *Venture Global Calcasieu Pass, LLC*, FE Docket No. 13-69-LNG, 79 FR 30109 (May 27, 2014); *Eos LNG LLC*, FE Docket No. 13-116-LNG, 78 FR 75337 (Dec. 11, 2013); *Barca LNG LLC*, FE Docket No. 13-118-LNG, 78 FR 75339 (Dec. 11, 2013); *Magnolia LNG, LLC*, FE Docket No. 13-132-LNG, 79 FR 15980 (Mar. 24, 2014); *Delfin LNG LLC*, FE Docket No. 13-147-LNG, 79 FR 16782 (Mar. 26, 2014); *Waller LNG Svs., LLC*, FE Docket No. 13-153-LNG, 79 FR 41685 (July 17, 2014); *Gasfin Development USA, LLC*, FE Docket No. 13-161-LNG, 79 FR 44439 (July 31, 2014); *Louisiana LNG Energy LLC*, FE Docket No. 14-29-LNG, 79 FR 57896 (Sept. 26, 2014); *Venture Global Calcasieu Pass, LLC*, FE Docket No. 14-88-LNG, 79 FR 66707 (Nov. 10, 2014); *SCT&E LNG, LLC*, FE Docket No. 14-98-LNG, 79 FR 75796 (Dec. 19, 2014); *Downeast LNG, Inc.*, FE Docket No. 14-173-LNG, 80 FR 13532 (Mar. 16, 2015); *Venture Global Calcasieu Pass, LLC*, FE Docket No. 15-25-LNG, 80 FR 36977 (June 29, 2015); *G2 LNG LLC*, FE Docket No. 15-45-LNG, 80 FR 44091 (July 24, 2015); *Texas LNG Brownsville LLC*, FE Docket No. 15-62-LNG, 80 FR 46966, (August 6, 2015); *Strom Inc.*, FE Docket No. 15-78-LNG, 80 FR 51793 (Aug. 26, 2015); *Cameron LNG, LLC*, FE Docket No. 15-90-LNG, 80 FR 46970 (Aug. 6, 2015); *Port Arthur LNG, LLC*, FE Docket No. 15-96-LNG, 80 FR 51795 (Aug. 26, 2015); *Corpus Christi Liquefaction, LLC*, FE Docket No. 15-97-LNG, 80 FR 51790 (Aug. 26, 2015). The Notice of application for Flint Hills Resources, LP is currently pending in FE Docket No. 15-168-LNG.

(3) Hand delivering an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES**.

For administrative efficiency, DOE/FE prefers comments to be filed electronically using the online form (method 1). However, for those commenters lacking access to the Internet, comments may be filed in hard copy using one of the other two methods identified above. All comments must include a reference to the “2014 EIA LNG Export Study” and/or “2015 LNG Export Study” in the title line.

The 2014 EIA LNG Export Study and 2015 LNG Export Study are available for inspection and copying in the Division of Natural Gas Regulation docket room, Room 3E-042, 1000 Independence Avenue, SW., Washington, DC 20585. The docket room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. The two studies and any comments filed in response to this Notice will be available electronically at the following DOE/FE website: <http://www.energy.gov/fe/2015-lng-study>.

Issued in Washington, D.C., on December 18, 2015.

John A. Anderson,

*Director, Office of Regulation and International Engagement,
Office of Oil and Natural Gas.*

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